ABSTRACT

A system for the efficient distribution of live and stored audio/video streams to multiple subscribers without degrading normal data delivery services. The system segments one or more frequency bands into sub-bands, or channels, each of which is capable of carrying encoded audio, video, and other data streams, to a plurality of subscribers. Each channel transmitted in the system provides full-duplex operation so that each subscriber may indicate what specific services are desired, such as audio/video broadcast, two-way data transfer, video library access, pay-per-view video, interactive video, and audio file transfer. A transmission headend facility ('hub') broadcasts multiple channels of video/audio data (e.g., Internet data) in unicast mode via a shared media transmission facility to multiple subscribers. Simultaneously, selected video/audio/data is transmitted in Internet Protocol multicast mode over one or more channels of the segmented frequency band. The subscriber is provided a device which simultaneously and dynamically demodulates 2 or more channels and interleaves the information over a single ethernet interface connected to one or more IP enabled devices. Each subscriber thus has the capability of, for example, receiving a video stream concurrent with many other subscribers while simultaneously interacting uniquely with the Internet or other data network.

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